

Mica Powders: A Tool for Gilders

by Anne Vazquez

An important tool for finishers and gilders are mica powders. When mixed with a binder such as lacquer, varnish, shellac, or acrylic, these powders form a metallic paint with a reflective pearlescent appearance. Ground from stone, this material has many applications: touch ups on gilded frames, flash gilding, highlighting faux marble and stone, and as a wash over solid colors.

Mica powders are often used as an alternative to bronze powders, which were long the material of choice for these techniques. However, mica powders have several qualities that differ from bronze and many craftsmen have found them to be desirable.

For one, because mica powders are ground from stone, they are non-toxic. Meanwhile, the metallic flakes of bronze are toxic and therefore a health hazard.



Powders are available in many colors, including golds, silvers, pewters with various highlights. Colors can also be mixed for unusual looks.

Mica powders also do not tarnish as metal does. When mixing your mica powders, if you choose a binder that does not yellow with time, you can create a surface coating that will retain its original appearance for many years. As a metal, bronze powder oxidizes (as bronze will in any form). These pigments are usually stable until the protective coatings are worn off

or the metal content of the coating chemically reacts with the binder. Since mica is an inert rock, it does not chemically react with any binder during or after application.

Mica also has more of a reflective surface than bronze powders. Mica powders are translucent, while bronze powders are opaque. Also, the surface of a mica powder particle is multifaceted, while a bronze powder particle has only two facets.

Early History

The concept of the pearl essence characterizing mica powders emerged in the 17th century when a French rosary maker first observed the silky, flowing patterns in water in which bleak (a type of small fish) had been washed. He found that when he applied these small elongated hexagon patterns to alabaster, wax, or glass, it imparted the appearance of pearl. This was the origin of pearl essence.

The French used this pearl essence in a vehicle containing fish glue during the 18th century. But it wasn't until the 20th century, with the development of nitrocellulose lacquers and celluloid, that pearl essence became an industry.

Working With Mica

When making metallic paints, mica powders can be added safely to virtually any lacquer, varnish, shellac, or acrylic. Once properly mixed, they may then be used like paint. (Mica powders should not be used with water because they will dissolve.)

Mixing mica powders, regardless of your choice of medium, should be done as follows:

- Place the medium of choice in a small container.
- Add small amounts of mica powder to the medium until it has been absorbed. This should

create a smooth, heavy blend (similar to heavy cream).

- Next, add this mixture to more of the same medium in a larger container.
- Stir this mixture, adding small amounts of the mica powder at the same time until you have the consistency best suited for the project at hand.

Note: The less powder you add, the more transparent and light-

because they are available in shades of gold, copper, silver, pewter, mother or pearl with red, blue, or violet highlights, which can all be mixed as well.

Manufacturers have created this wide range of color by treating the basic powder hues with titanium oxide or ferrous oxide. This treatment does not change the chemical reactivity of the powders.

As with all pigment, the size of the particle is important and with some micas, there is a choice between regular and micro (extra fine). An external mica is also available in some colors, and this type of particle is larger than with the other types.

It is important to note that when touching up or color

matching, there will be an apparent difference between the mica pigment and actual metal leaves. This is because when light hits metal leaf, it reflects off of a single plane. On the other hand, when light hits a pigmented surface (as with a mica powder coating), the light is reflected off of multiple surfaces.

This makes the metallic pigments appear grainy compared to metal leaf. This grainy appearance may be a concern, but it's not always visible from a distance. A good approach may be to restrict touch-ups to shadowed or dark areas of the frame, and releaf the

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to gold or silver leaf.*

reflective it will be. On the other hand, the more powder you add, the less translucent and light-reflective the coating will be.

It's also important to note that the appearance of mica coatings may be customized by varying the color of the primer on the surface and by adjusting the amount of powder added to the coating. Mica powders take on a different hue when applied over yellow, red, black, or white surfaces.

The many mica colors can be mixed together to create various color tones. When color matching to an existing surface is an issue, mica powders can be useful

highlight areas. Mica powders are an option in these cases because it is less costly than gold leaf (or even silver for that matter).

Flash Gilding

Mica powders can also be brushed onto a surface that has been coated with a binder, rather than mixing

the binder and pigment before application. The binders of choice are usually the gilding size, linseed oil, or a water-based acrylic gilding size.

By applying the powders directly to the prepared frame surface, the result is a more opaque and even surface with a brilliant

luster. There is no need to seal the surface, though that is an option.

As when using mica powders to make metallic paints, the final appearance of flash gilding can be altered by varying the color of the primer. For example, a gold-colored mica powder will take on a different hue if applied over a yellow, red, white, or black surface. The primed surface should have a semi-gloss or gloss finish.

No matter what the frequency of gilding jobs in your shop, mica powders are a good tool to have on hand. Creating interesting metallic finishes, as well as being able to do quick touch-ups on gilded frames gives you an opportunity to offer them another service. ■